

<p>95-156568/21 A97K01 (A14) OEKO-TEC UNWELTSCHUTZSYSTEME GMBH 93.10.25 93DE-4336319 (95.04.26) A62D 1/00 Fire extinguishing agent for use as dry powder or additive in water - contains hydrogen-forming polymer powder and a substance with a large surface structure and/or a capillary and/or fibrous structure (Ger) C95-072092 R(AT)CH DE ES FR GB IT LI NL) Adm. Data: BRUECKNER M 94.10.20 94EP-116531</p>	<p>OEKO-93.10.25 *EP 649669-A1</p>	<p>A fire extinguishing agent (I), for use as a dry powder or as an additive in water, contains mainly (a) hydrogen-forming polymer powders and (b) substances with a large surface structure and/or a capillary and/or fibrous structure, mixed to give a free-flowing material. Also claimed is a process for the prodn. of (I). <u>USE</u> Used as a dry powder extinguisher for direct application to the seat of a fire and as a swollen, wet extinguisher obtd. by mixing with water to a gel-like consistency, for use in commercial fire extinguishers and fixed units, or as a dry or gelled additive in fire</p>	<p>A(12-S9, 12-W12) K(1-A)</p> <p>extinguisher tanks for use by fire service techniques (claimed). <u>ADVANTAGE</u> Provides a fire extinguishing agent which can be used as a dry powder or as an additive in water, without the disadvantages of prior art systems (e.g. lack of cooling effect in foaming agents, delayed swelling and agglomeration of the super-absorber (a), etc.).</p> <p><u>CLAIMED PROCESS</u> The prodn. of (I) comprises: mixing (b) with the mechanically pulverised, dry, free-flowing super- absorber (a), after or during mixing with any other components; or mixing (b) with crushed, water-contg. raw (a) (obtd. by gel polymerisation and not yet dried), then drying, grinding and opt. adding other components; or mixing (b) with the monomer soln. for (a), polymerising the mixt. by gel polymerisation, drying, milling and opt. adding other components.</p> <p><u>PREFERRED PROCESS</u> Pref., (b) is added to the monomer soln. as above.</p> <p>EP 649669-A+</p>
---	---	---	---

1a

PREFERRED COMPOSITION

(1) contains 10-80 wt. % (a) and up to 80 wt. % (b), and pref. also a fireproofing agent or fire retardant in amts. up to 10 wt. %.

(a) are crosslinked, hydrogen-forming polymers obtd. by polymerisation of acrylamide and/or acrylic acid and/or a salt thereof in the presence of up to 2 wt. % bis-acrylamido-acetic acid, trimethylolpropane triacrylate and/or tetra-allyloxyethane.

(b) consists of kieselguhr, wood flour, paper fibres, fibrous or milled cellulose, fibrous or milled plastic, milled plastic foam and/or amorphous hydrophobic silica.

(1) may also contain up to 30 (pref. up to 10) wt. % polyglycol, up to 30 (pref. up to 10) wt. % organic adhesive, up to 10 (pref. up to 5) wt. % biodegradable organic wetting agent, up to 5 (pref. up to 1) wt. % biodegradable colouring agent, up to 10 (pref. up to 5) wt. % flow accelerator and up to 10 (pref. up to 0.3) wt. % stabiliser.

EXAMPLE

A solid polymer gel was prepd. by polymerising Na acrylate (from 240 g acrylic acid, 180 g NaHCO₃ and 635 g water) at up to

80°C in the presence of 1.5 g Na di-iso-octylsulphosuccinate, 2 g Genapol OX 130 (RTM), 2.5 g trimethylolpropane triacrylate, 0.2 g 2,2'-azobis-amidinopropane.2HCl, 0.6 g K per-disulphate and 0.05 g ascorbic acid.

1000 g powdered gel was mixed with 300 g kieselguhr and 20 g Na and/or K silicate and/or ammonium polyphosphate (30 % aq. soln.), homogenised in a kneader, dried at above 80°C and ground to give a powder (1).

The prod. was very effective as a dry powder extinguisher or as an additive to water, in which it exhibited good swelling properties and formed a homogeneous mixt. without clumping. (GW)

(8pp1712DwgNo.0/0)
SR:EP199897 EP295412 FR2615399 FR2628976 US3354084 US3666707 US3976580

EP 649669-A

(C) WPI/Derwent

AN - 1981-84248D [46]

A - [001] 011 04- 074 075 076 086 231 240 252 398 426 525 532 537 57- 61-
62- 678 688 720

CPY - SAKB

DC - A97 E35 K01 P35

FS - CPI;GMPI

IC - A62B1/00

KS - 0231 0409 0619 1981 2405 2509 2575 2675 2857

MC - A12-W12 E31-K06 K01-A

M3 - [01] B115 B702 B713 B720 B815 B832 B833 C108 C500 C802 C804 C807 M411
M781 M903 Q441 R023

PA - (SAKB) OTSUKA KAGAKU YAKUHI KK

PN - JP56125066 A 19811001 DW198146 005pp

PR - JP19800028444 19800305

XIC - A62B-001/00

AB - J56125066 Aqueous fire extinguishing soln. contains condensed ammonium phosphate and pref. water soluble polymer and/or a colourant; The degree of condensation of the condensed ammonium phosphate is pref. 2-60 and it is used in amt. of 5-50 wt.%. The water-soluble polymer is pref. CMC, polyacrylic acid or polyacrylamide. The colourant is pref. water-soluble direct dye. The content of water-soluble polymer is pref. 2-3 wt.% and that of colourant is pref. 0.01-0.03 wt.%.
- Fire can be extinguished using small amt. of the soln. The soln. is less corrosive to extinguisher materials and has low toxicity and causes less pollution than prior art materials.

AW - POLYACRYLAMIDE POLYACRYLIC ACID CMC CARBOXYMETHYL CELLULOSE
CARBOXY
METHYLCELLULOSE

AKW - POLYACRYLAMIDE POLYACRYLIC ACID CMC CARBOXYMETHYL CELLULOSE
CARBOXY
METHYLCELLULOSE

IW - AQUEOUS FIRE EXTINGUISH SOLUTION CONTAIN CONDENSATION AMMONIUM
PHOSPHATE PREFER WATER SOLUBLE POLYMER COLOUR

IKW - AQUEOUS FIRE EXTINGUISH SOLUTION CONTAIN CONDENSATION AMMONIUM
PHOSPHATE PREFER WATER SOLUBLE POLYMER COLOUR

NC - 001

OPD - 1980-03-05

ORD - 1981-10-01

PAW - (SAKB) OTSUKA KAGAKU YAKUHI KK

TI - Aq. fire extinguishing soln. - contains condensed ammonium phosphate
and pref. water soluble polymer and/or colourant